

AT THE HEAD OF LOCH FYNE.¹

A LARGER number of contributors even than those mentioned on the title-page have conspired to make this memoir authoritative and complete. It is descriptive of Sheet 37 of the 1-inch geological map of Scotland, an attractive work published in 1903, in which the north-east and south-west lines of the Caledonian earth-folding predominate, and are followed out in the trend of the intrusive masses. The memoir is illustrated by excellent plates, one of which is here reproduced; and the fact that part of the ground is familiar to the tourist gives it an additional interest.

The region described is cut, from corner to corner, by the noble inlet of Loch Fyne. The parallel reach

landscape. The fundamental rocks of the district are metamorphic, and formed a part of the Caledonian continent, on which the Old Red Sandstone gathered; and Mr. Hill points out how denudation is removing the Devonian lavas and lake-deposits in the north-west, and is revealing, in the sculpture of the old continent, a highland much like that of modern days. The ice-flows of the Glacial epoch, however, have moulded the present surface in many of its details, have left erratic blocks in quaint positions on the hills, and have deposited moraines and banks of gravel across the edges of the ancient schists.

The metamorphosed series is mainly of sedimentary origin, with many bands of limestone. The albite-schists (p. 15), which are "highly micaceous or chloritic rocks with grains or crystals of clear



FIG. 1.—The summit of the Pass of Glencroë, with Loch Restil. The rugged hill scenery is formed by the Ben Bheula schists. From "The Geology of Mid-Argyll."

of Loch Awe lies in the north-west, and Loch Eck, banked out by gravel terraces from the sea, comes in near Loch Long in the south-east. The traveller by land usually enters the region by the steep and rugged fastnesses of Glencroë, and leaves it by Glen Aray, if he is willing to face the rain-swept moorland above which Cruachan towers in the north. The geological surveyors, however, have become familiar with a wide area practically untrodden by any visitor. Mr. Hill's appreciative introduction should be read with the aid of the hill-shaded Ordnance map, Sheet 37, one of the most beautiful products of a draughtsman who surely possessed a sentiment for

¹ "The Geology of Mid-Argyll." By J. B. Hill, with the collaboration of B. N. Peach, C. T. Clough, and H. Kynaston, with petrographical notes by J. J. H. Teall and J. S. Flett. Pp. vi+166. Memoirs of the Geological Survey, Scotland. (Glasgow, for H.M. Stationery Office: J. Hedderwick and Sons, Ltd., 1905.) Price 3s.

secondary albite," are of special interest. Dr. Teall supplies an analysis, showing 3.2 per cent. of soda and an equal amount of potash. This allows 28 per cent. of the rock to be formed of albite. "Green beds," which are hornblendic, and yet are not the intrusive epidiorites so familiar in Dalradian areas, occur in a band south-east of Loch Fyne, and may have been derived clastically from some preexisting basic igneous series (p. 18). True sills of epidiorite occur, however, plentifully among the metamorphic rocks between Loch Awe and Loch Fyne. In the same region there are numerous later intrusions of quartz-porphry and other igneous rocks, probably post-Silurian in age. "Kentallenite," described in detail by Mr. Hill in 1900 (Quart. Journ. Geol. Soc., vol. lvi., p. 531), and first known from the Appin promontory, occurs here and there, as a link between

the masses rich in alkalies and the biotite-peridotites. Mr. Kynaston (p. 102) regards this rock, with the granites and diorites of the north-west area, as contemporaneous with the Ben Cruachan granite, that is, as later than the Lower Old Red Sandstone lavafloes. The regional metamorphism of the older rocks of mid-Argyll is not due to these numerous intrusive masses, nor to any concealed dome of granite. It increases in intensity from north-west to south-east, and also along the strike of the ancient sedimentary series in a north-easterly direction, so that comparatively unaltered rocks of the "Loch Awe group" (p. 76) pass, outside the limits of Sheet 37, into schists of a very pronounced degree of crystallisation. Local thermal alteration tends to mask both the original clastic structures and the subsequent foliation (p. 39).

The form of the lake-floors in connection with the passage of ice across them is interestingly discussed in chapter xiii. At the time of maximum glaciation, the upper portion of the Loch Fyne ice moved out westward towards the Sound of Jura, the general south-westerly course being resumed as the ice thinned down again and became guided by the topographic features. It is held that Loch Awe at one time drained southward, when the level of its waters was nearly 200 feet higher than at present.

The economic resources of the district, which are neither conspicuous nor generally accessible, are referred to at the close of the memoir. If petrographic details naturally predominate in such a work, they only testify to the scientific thoroughness with which the Geological Survey is encouraged to explore the Scottish highlands.

THE EGYPTIAN HEAVEN AND HELL.¹

IN his "Egyptian Heaven and Hell" Dr. Wallis Budge has contributed another work to his already long list of books dealing with the subject of ancient Egyptian religions. It appears in three-volume form in the useful little series of "Books on Egypt and Chaldaea," written by Dr. Budge and Mr. L. W. King, and published by Messrs. Kegan Paul. Those who are interested in the subject are familiar with Dr. Budge's edition of the "Book of the Dead" in the same series. These volumes form a companion work, being an edition of the two subsidiary collections of funerary texts, "The Book of the Am-Tuat (that which is in Hades)" and "The Book of the Gates," which accompanied the great "Chapters of Coming Forth into the Day," the "Book of the Dead" proper. As in the former work, Dr. Budge gives the text, translation, and illustrations from the original papyri.

The two subsidiary books differ somewhat in purpose and scope from the "Book of the Dead" itself. The latter is a collection of spells and "words of magic power" to be learnt by the dead in order to win their way past the dangers of the unseen world into the presence of Osiris. The individual dead man, identified with Osiris, "the Osiris N," is the central figure of every chapter of the "Book of the Dead." "Chapter so-and-so. I, the Osiris so-and-so, say," and so on. But in the Book of That

¹ "The Egyptian Heaven and Hell." By E. A. Wallis Budge, Litt.D. Vol. i., The Book Am-Tuat, pp. viii+278; vol. ii., The Book of Gates, pp. viii+306; vol. iii., The Contents of the Books of the Other World described and compared, pp. xviii+232. (London: Kegan Paul and Co., Ltd., 1906.) Price 6s. net each volume.

which is in Hades, and in the Book of the Gates, the dead man is not the principal figure. In fact, in the first-named (hereinafter called "The Book of the Tuat") he hardly appears at all; the book is merely a description of the other world as it appears to the beatified spirits who follow the bark of the sun-god in its passage through Hades (the Tuat) from west to east, from his setting to his rising. During the night the dead sun-god, known as Auf ("his limbs," i.e. the carcass of the sun), sails through the regions of the underworld to give light to the dwellers therein, and during his voyage the souls of the blessed rise up and join themselves to his boat. It is a weird conception, and the description of these regions of the dark beyond, as given in Dr. Budge's book, is still more weird. The Tuat is divided into several distinct Tuats, each corresponding to one of the great Egyptian necropolises, Abydos, Thebes, Sakkara, and Heliopolis. Each has its peculiar features, and appears to be tenanted by demons and spirits with unpronounceable names and of strange appearance, some of whom are good and help the bark of the god on its way, while others are bad and seek by every means in their power to oppose its progress. These are vanquished in succession as the sun passes their territories. The "Book of the Gates" is so called on account of its chief feature being the successive mention of the gates of the Tuats, each of which has its demon-guardian, who is passed by means of the appropriate spell. In it the

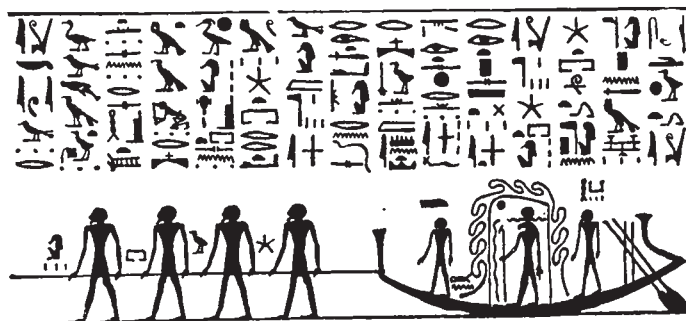


FIG. 1.—The Boat of the Sun towed by Gods of the Tuat. From "The Egyptian Heaven and Hell," vol. ii., The Book of Gates.

god Osiris appears, but not to the extent to which he appears in the "Book of the Dead," the chapters of which seem to have originally emanated from the original seat of his worship at Busiris in the Delta. Indeed, the "Book of the Tuat" may be a much later invention of the Theban priests, designed to divert the attention of the faithful from the northern Osiris to the sun-god of Thebes. It is homogeneous in plan, which the "Book of the Dead" is not. Dr. Budge gives a parallel version of both subsidiary books in his third volume, so that they can conveniently be compared. In the same volume are to be found his introduction and a most compendious index.

The pictures of these two books are extremely remarkable. Their general appearance will be well known to those who have visited the tombs of the kings at Thebes, or have seen the wonderful alabaster sarcophagus of King Seti I. in Sir John Soane's museum in Lincoln's Inn Fields. Under the eighteenth and nineteenth dynasties the walls of the royal tombs were decorated with scenes from the "Book of the Tuat" and "Book of the Gates," so that the dead monarchs could see in pictures at least the weird forms which the imagination of the